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ABSTRACT

A unique psychometric device, The "Lock Box," has been developed to measure the ability of preschool children to structure a novel problematic situation. The primary purpose of the box is to identify those preschoolers with mental ages ranging from 2 1/2 to 6 years who have difficulty imposing an orderly plan on their explorations and whose movements are random, repetitive, and without apparent goal direction. The box can also be used to identify children with perceptual-motor dysfunctions. Differing from most traditional tests which focus on the product of learning, this device emphasizes the process of learning, is language-free, and utilizes three-dimensional, highly appealing, and lifelike materials. As its name suggests, the box is a large container. Each of 10 compartments within the box contains a different toy and can be closed with a different lock. In administering the measure, the examiner codes the spontaneous moves of the child for 6 1/2 minutes. Five major scores are derived from the performance: total adaptive moves, total non-adaptive moves, number of latches unlocked, organization of moves, and aimless actions. (Rules for administering, coding, and scoring the measure and for constructing age-referenced profiles are indicated). (RH)

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THE LOCK BOX: EVALUATING MENTAL ORGANIZATION IN PRESCHOOLERS

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Abstract

The Lock Box -- a large container consisting of ten compartments each housing a different toy and closed with a different lock -- was developed to evaluate how children structure a complex free choice situation. Its clinical purpose is to identify those preschoolers with mental ages of 2½ to 6, who have difficulty imposing an orderly plan on their explorations, whose movements are random, repetitive and without apparent goal direction. Secondarily, the Box can be used to identify children with perceptual-motor dysfunctions. The Lock Box differs from most traditional tests by emphasizing the process rather than the product of learning. It therefore serves as a useful supplement in a screening or full evaluation battery (administration time 6½ minutes). Although low scores on the Lock Box may indicate mental retardation, the Lock Box is not an intelligence test and a poor Box performance is consistent with average or superior intelligence. Regardless of the diagnosis, poor performance on the Box may alert the diagnostician to specific difficulties interfering with a child's learning and/or adjustment.

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Novel Aspects of the Lock Box

1. The emphasis in this test is on spontaneous rather than elicited behavior. For 6½ minutes the examiner codes the spontaneous moves of the child without interfering in any way. It is non-authoritarian and non-invasive.
2. The Lock Box is a highly motivating test; there are rarely refusals. It encourages children to generate their own solutions without predetermined right/wrong responses.

3. The test is language-free. The child's speech is not recorded and no verbal instructions are necessary.

4. The Lock Box measures mental organization, how a child structures a novel problematic situation. This fundamental attribute -- the ability to impose order -- is not measured by other psychometric instruments.

5. The Lock Box measures psychomotor competence with three dimensional, highly appealing and life-like materials, i.e.,locks.

Administration

The Lock Box is recommended for children with chronological or mental ages of 2½ to 5½, suspected of developmental delay, specific learning disabilities, or behavioral problems. The examiner codes all the child's spontaneous moves with both locks and toys over 6½ minutes. This information is then tallied onto a summation sheet. Five major scores are derived from the performance.

Coding

The coding system is as follows:

TOY ACTIVITY

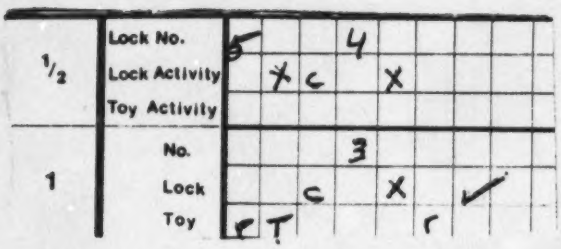
Ar	Attempts to remove toy
r	Removes Toy
AR	Attempts to return toy
R	Returns toy
T	Tactile/Visual exploration
A	Adaptive play
M	Combination play
P	Primitive play
W	Shares toy

CODING KEY

LOCK ACTIVITY

I	Inhibition
\	Unsuccessful attempt to unlock
X	Unlocks
O	Opens without unlatching
C	Closes without attempting to relock
!	Unsuccessful attempt to relock
✓	Relocks
L	Leaves
S	Scans
P	Primitive Lock approach

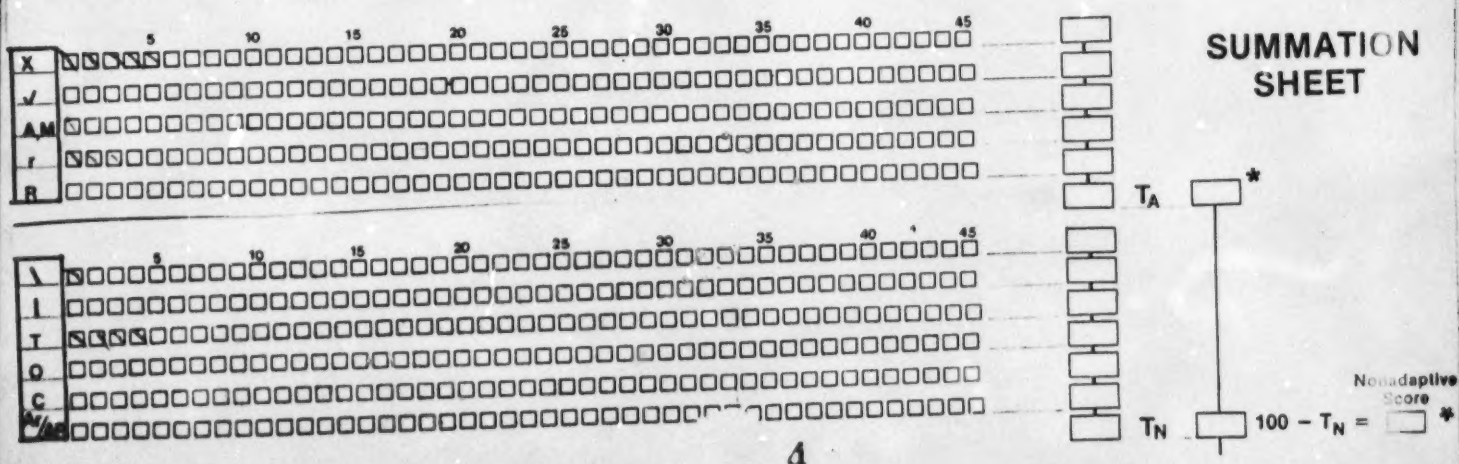
The code sheet is divided into 13 sections separated by bold lines. Each section represents a 30 second interval. On the first row in each section the examiner records the lock (1 through 10) a child engages; on the second row the lock manipulations and on the third row play behavior. For example in the following segment the child:



unlocked and then closed latch 5, unlocked latch 4, removed the toy, explored it, and closed the door. He then unlocked 3, removed the toy and relocked the door.

Scoring

The moves made by the child are tallied onto the summation sheet which is arranged so that the scores for the five scales can be easily identified. The first three scales all listed under Competence include Total Adaptive (TA), Total Non-adaptive (TN) which is subtracted from 100, and number of latches unlocked:



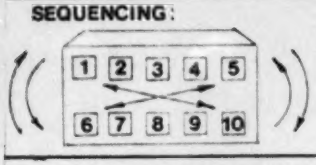
LOCK ACTIVITY

	1	2	3	4	5	6	7	8	9	10	TOTALS
• UNLOCKED											
• ATTEMPTED											
• NOT ATTEMPTED											
											10

The next scale, Organization, is composed of sequencing -- the number of adjacent locks a child pursues -- and Patterning -- the ability of a child to follow the same pattern of exploration (e.g. open a door, remove a toy and relock) over three or more locks.

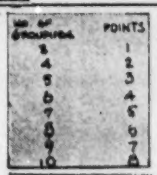
ORGANIZATION

SEQUENCING:

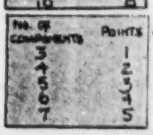


- ONSET: 2 Pts. if sequence of 3 or more is immediate/1 pt. if delayed one or two moves
- Points for No. of adjacent locks.

PATTERNING: (RECORD PATTERN BELOW)



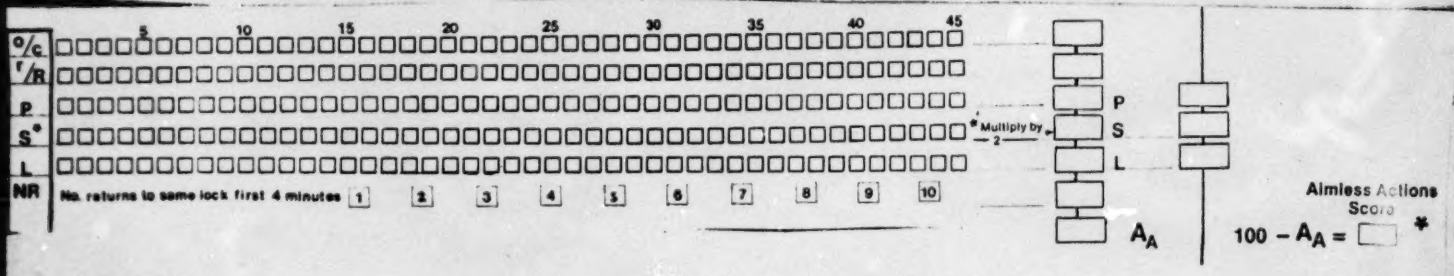
- Points for No. of groupings



- Points for No. of components
- Nature of components: 2 pts. if identical/1 pt. if similar
- Position of groupings: 2 pts. if together/1 pt if interrupted

Organization Total (SEQUENCING & PATTERNING)

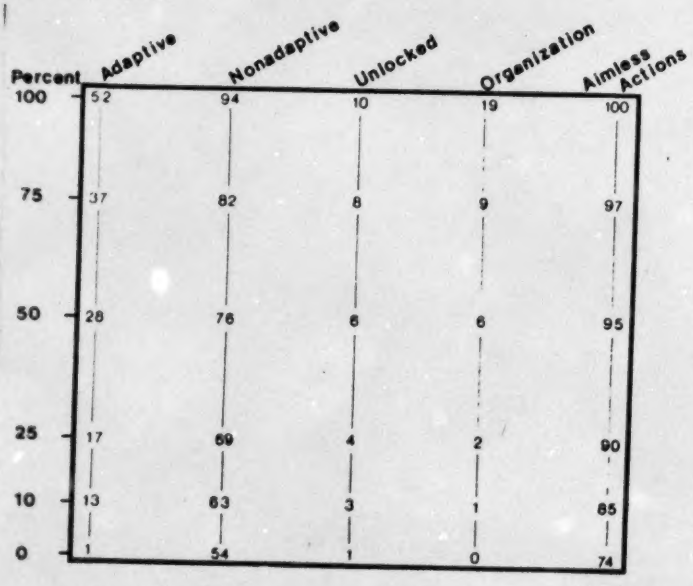
The final scale, Aimless Actions, describes the child's purposeless activity (e.g., leaving the Box, scanning the locks, opening and closing a door without removing a toy and returning to locks already approached).



Profile

Scores for the major scales are transferred to the face sheet and graphed on the profile corresponding to the child's age. It has been found that retarded children are apt to do poorly on all scales, disturbed children with normal IQs are likely to fall down only on Aimless Actions, whereas distractible/hyperactive children will probably show low scores on Organization and Aimless Actions.

ANALYSIS



SCORES

Competence

Total Adaptive _____

*Total Nonadaptive _____

Number Unlocked _____

Organziation

Total _____

Aimless Actions

*Total Aimless Actions _____

*Totals are 100 minus the raw score.